

# MONTHLY WEATHER REVIEW,

## OCTOBER, 1881.

(General Weather Service of the United States.)

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WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

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### INTRODUCTION.

In preparing this REVIEW the following data, received up to November 20th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 133 Signal Service stations and 15 Canadian stations, as telegraphed to this office; 186 monthly journals and 161 monthly means from the former, and 15 monthly means from the latter; 212 monthly registers from Voluntary Observers; 55 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from the local Weather Services of Iowa, Nebraska and Missouri, and of the Central Pacific Railway Co.; reliable newspaper extracts; special reports.

### BAROMETRIC PRESSURE.

The distribution of mean atmospheric pressure over the United States and Canada for the month of October, 1881, is shown by isobaric lines (in black) upon chart No. II. The area of lowest pressure covering as it does the Canadian Maritime Provinces probably results from a translation northeastward of the area of low for September, embracing at that time the Upper Mississippi valley. Over the interior of the country east of the Mississippi the pressure has rapidly increased during the month, and the area of highest (abnormally high) pressure covers the South Atlantic states. Compared with the past month the pressure is everywhere higher except in the Canadian Maritime Provinces, where the most decided fall of the month has occurred. The region of greatest increase embraces that portion of the country from the Arkansas river northward to the British Possessions.

*Departures from the Normal Values for the Month.*—Compared with the means for previous years, the mean pressure for the present month is everywhere above the normal east of the 90th meridian, the increase varying from 0.04 to 0.12 inch. Throughout the Rocky Mountain slopes, in the Lower Missouri valley, and in the central portion of the Upper Mississippi valley, the pressure is from 0.01 to 0.06 inch below the normal, the barometer having been slow to recover from the marked deficiencies of these regions during September. In the Plateau regions, South Pacific and North Pacific coast regions, other areas of deficiency exist ranging from 0.01 to 0.13 inch, being most marked in the Middle Plateau. Stations reporting a normal condition are Shreveport, Memphis, St. Louis and Keokuk.

*Barometric Ranges.*—The range of pressure for the month has generally varied from 0.5 to 1.0 inch, and in the extremes from 0.24 inch at San Diego to 1.2 inches at Yankton and 1.26 inches on summit of Mt. Washington. Throughout the several districts the monthly barometric range varied as follows: New England, from 1.13 inches at Albany, Thatcher's Island and Burlington to 1.26 inches on summit of Mt. Washington; Middle Atlantic states, 0.9 at Lynchburg to 1.13 at Sandy Hook; South Atlantic states, 0.49 at Jacksonville to 0.95 at Norfolk; Eastern Gulf states, 0.5 at Pensacola to 0.57 at Atlanta; Florida Peninsula, 0.36 at Key West to 0.46 at Cedar Keys; Western Gulf states, 0.47 at Castroville to 0.77 at Ft. Gibson; Tennessee and the Ohio valley, 0.55 at Nashville to 0.89 at Morgantown; Lower Lake region, 0.8 at Sandusky to 1.05 at Oswego; Upper Lake region, 0.86 at Port Huron to 1.17 at Duluth; Upper Mississippi valley, 0.67 at Cairo to 1.12 at LaCrosse; Missouri valley, 0.87 at Ft. Bennett to 1.20 at Yankton; extreme Northwest, 1.01 at Ft. Buford to 1.19 at Moorehead; Northern Slope, 0.61 at Cheyenne to 0.91 at Ft. Keogh; Middle Slope, 0.66 at Denver to 0.91 at Dodge City; Southern Slope, 0.46 at Stockton to 0.73 at Jacksboro; Rio Grande valley, 0.49 at Eagle Pass and Laredo to 0.98 at Rio Grande; Southern Plateau, 0.31 at Tucson to 0.42 at Yuma;